

Message

From: Minter, Douglas [Minter.Douglas@epa.gov]
Sent: 1/9/2018 3:22:34 PM
To: Jann, Stephen [jann.stephen@epa.gov]
CC: Shea, Valois [Shea.Valois@epa.gov]; Cheung, Wendy [Cheung.Wendy@epa.gov]; Dellinger, Philip [dellinger.philip@epa.gov]; Bennett, James [bennett.james@epa.gov]; Boomgaard, Craig [Boomgaard.Craig@epa.gov]
Subject: FW: Seismicity review

Happy New Year Steve: in response to your request, Wendy provides some overview below of what we have done to date. While our process for all permit applications is fairly minimal at this point, we have spent more time focused on this issue for specific projects. The most recent example has been proposed deep well disposal of uranium ISR wastes associated with our draft Class V permit for Dewey Burdock. We received numerous comments on this during our 105 day public comment period in response to our proposing some prescriptive reporting and operating requirements. Our deep Class V permit for the USBOR's Paradox Valley project for reducing subsurface saline discharge to the Colorado River is a notable exception. It has extensive requirements in place to account for and address a long history of primarily low level seismic events induced by injection.

Douglas

From: Cheung, Wendy
Sent: Tuesday, January 9, 2018 8:00 AM
To: Minter, Douglas <Minter.Douglas@epa.gov>
Cc: Shea, Valois <Shea.Valois@epa.gov>
Subject: RE: Seismicity review

We have historically looked for/asked operators to identify known faults proximate/within to the AOR, but there is nothing more in the permit template. We have 2 Class I permits that require the operator to receive and notify EPA reports from USGS Earthquake monitoring website if there is an occurrence within x miles (it's 50 miles for the East Cherry Creek, not sure what Chuck wrote into this Sterling permit). Another permit is the Class V Paradox Valley permit that focuses on seismic activity. Lastly, COGCC has developed a "traffic light" approach as well.

From: Minter, Douglas
Sent: Tuesday, January 2, 2018 10:11 AM **To:** Cheung, Wendy <Cheung.Wendy@epa.gov>
Cc: Shea, Valois <Shea.Valois@epa.gov>
Subject: FW: Seismicity review

Welcome back Wendy: would you have input on Steve's question through your own permitting work and/or updating our Class II permit template language? I think the most recent permitting example we have is DB.

Thanks,

Douglas

From: Jann, Stephen
Sent: Wednesday, December 27, 2017 1:03 PM
To: Dellinger, Philip <dellinger.philip@epa.gov>; Bennett, James <bennett.james@epa.gov>; Minter, Douglas <Minter.Douglas@epa.gov>
Subject: Seismicity review

Hi Phil, James, and Douglas. I hope each of you is enjoying the holidays. I am writing at the request of the Ohio DNR. They would like to know how, if at all, your Region may assess seismic risk when reviewing applications for EPA-issued injection permits. I told Ohio that R5 screens all applications using [Minimizing and Managing Potential of Injection-Induced Seismicity from Class II Disposal: Practical Approaches \(PDF\)](#). I also told Ohio that R5 imposed “traffic-light” conditions, so to speak, in our two Class VI permits and two additional Class II permits. The latter two permits were issued for wells in a Region of MI that recently experienced two natural earthquakes. Do you screen applications with respect to natural or induced seismic risk? What references do you use as the basis for the screening? Have you denied any applications or imposed conditions in permits as a result of the reviews?

Steve.

Stephen M. Jann, Chief
Underground Injection Control Branch (WU-16J)
EPA, Region 5
77 W. Jackson Blvd.
Chicago, IL 60604